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# THE DECORATOR AND FURNISHER.

## SOMETHING ABOUT VENEERS.

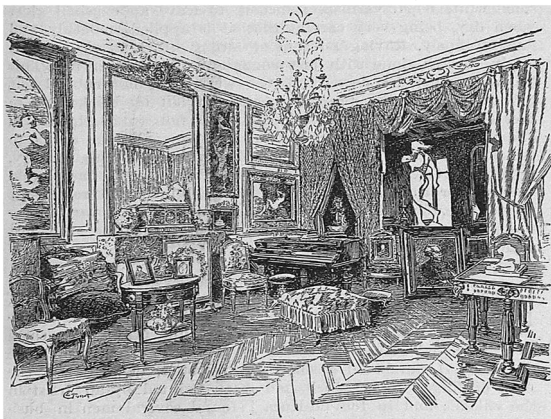
BY N. S. STOWELL.

HAS it ever occurred to you when you have been looking with conscious pride at your elegant rosewood piano and mahogany furniture that its beauty is, as a matter of fact, only skin deep. If not, just give this subject a few moment's consideration, and learn how art and ingenuity cannot only add to the attractions of nature, but actually create charms where none exist.

There may be, and doubtless are, persons who are able and willing to pay one or two thousand dollars for a single piece of furniture, but the masses of the people will feel that they do well if their entire household equipment is worth that sum. Many a comfortably furnished house has been filled up for less than the cost of a single log of wood, such as one may see any day in a veneer cutting establishment at the foot of East Eighth street, and there are small piles of sheets of wood veneer no thicker than the blotter you use on your desk that are worth enough money to keep a small family in comforts and many luxuries for a whole year, and yet a stalwart man could walk off with one of these piles on his shoulder and not tax his energies very seriously.

Just think of it, extravagant old-timer! Remember when you fed your wide-throated and hungry fireplace with burl walnut and ash, and curl maple and white birch that was as full of bird's-eyes as a piece of satin damask table linen. How you toiled and tugged and struggled to split some of those logs that had a grain like the most exquisite quality of watered silk, and when your strength and patience gave out, you turned about and, just because the log was too big to carry into the house, and too tough to split, built a fire at one side of it and actually made ashes of it as the only way to get rid of it. Think of it and groan as you walk through the veneer sawing and cutting mill and see logs that have not one fraction of the beauty and perfection of the logs of old, cut up into pasteboard-like thickness, a single sheet being worth from three to five dollars, and some extra fine logs, like those you destroyed, bringing eight or nine hundred dollars and up to two thousand, and begged for and hunted all over the world for even at that price.

There is scarcely a place in this country so obscure or so remote that the agents of the veneer manufacturers have not been there, and so nearly exhausted is the supply of fine natural wood, that all sorts of experiments have been tried to prepare straight-grained plain wood in such a fashion that it will produce the waved or curled effect and answer the demand of fine woodworkers of all classes.



THE SALON IN ALEXANDER DUMAS' HOUSE.

Almost everything fine in the way of furniture is veneered nowadays. There are a few very handsome pieces of mahogany and other fine furniture that are cut out of solid wood, but they are most decidedly in the minority, and are only solid when the face of the wood is such that veneering is impossible. Strips as large as one's little finger are carefully laid on and so accurately are they adjusted and fitted that only an experienced eye can detect the joining.

There is another fact that possibly you don't know, and that is, that the cases of some of the finest grand pianos are made entirely of veneers not over one-sixteenth of an inch thick. The thin sections are saturated with glue, and pressed into a form where they are held until they are dry. In this way a frame

is made that has a dozen times the durability of solid wood and quite as much resonant quality; indeed, it is in every way superior to solid wood, which must be joined and framed, while the veneer may be continuous, which is of great importance. It took manufacturers a long time to learn that sound-waves travel more evenly over an unbroken fibre, but on this they finally struck, and the cases as well as the sounding-boards are made of full length veneers. It is quite possible that this idea will yet be carried much further than it is at present, and we may yet see full moulded piano cases where there is not even a single joint. With this improvement there will be finer tones and more depth and singing qualities than is possible in cases as they are at present constructed.

But to return to veneer making. By the old process the log was cleared of its bark and placed in a steam box for some hours. When thoroughly "done" it was taken out and set into



STUDY OF ALEXANDER DUMAS.

a frame, the ends being fastened by large spikes. As the log turned like a wheel on its axis, a keen knife shaved off a thin layer of wood varying from one-thirtieth to one-eighth of an inch according to the adjustment of the knife. As the steaming shaving rolled away from the knife it was carried back either by hand or machinery and rolled up or laid away in sections, depending on the previous preparation of the log. In some cases deep cuts are made in the logs dividing them into halves or quarters, in which case the sheet of veneer is the width of the whole section from one cut to another. As the outside is shaved off the sheets of veneer become narrower until only a small round middle remains of a log once three or four feet in diameter.

This process is still employed for fine bird's eye-and curl maple or burl and imported woods of any kind. But there is a dearth of fancy grained woods, and prices for them have been slowly creeping up until there are indications that even veneered furniture would soon be beyond the reach of persons of moderate means.

Curious fact, isn't it, that when one thing fails there is always something found or invented to take its place? and so when there were no more fancy woods, and even after the old apple trees were looked over and gnarled and knotty particles of the orchard had been sacrificed, inventive genius went to work to find a way to make fancy grained wood where none existed naturally.

After scores of experiments a plan was devised by which this has been accomplished, and in an eminently simple and practical fashion.

Examine any piece of wood and you will see that the bulk is made up of layers, one outside of the other, and, of course, growing larger as it nears the outside of the tree. Each of these layers is supposed to represent one year's growth, and lumbermen claim that they can tell the age of a tree from the number of these layers. Slow growing wood is usually of the finest, closest grain, and rapid, rank growth is apt to be coarse and of looser texture. A log of moderately fine grain is selected and thoroughly steamed and put into the cutting machine, when one by one, as the knife passes through the wood, thin sheets of exquisitely waved veneering are turned off and carried away by careful hands.

The natural grain of plain wood runs this wise :



but the veneers show waved lines after this style, save that the



waves are somewhat over one-fourth of an inch high. Of course

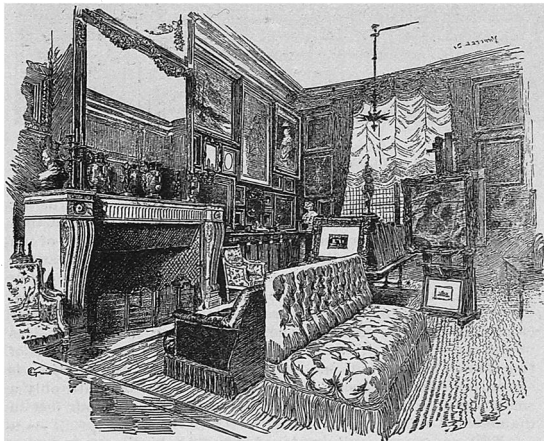
## THE DECORATOR AND FURNISHER.

if a knife cut a quarter of an inch deeper into the grain on a curve of one inch of thereabouts, it is easy to see that it must take in the growth of two or more years, and cutting through these which always vary more or less in thickness, grain and color, the result is a variegated surface, either finely mottled or in irregular curves like watered silk. This wavy, rippled surface is the furniture manufacturer's delight. It is by many persons preferred to burl or bird's-eye as possessing greater variety and showing more perfectly the effect of high polishing and finish.

The grain is often treated to filler of various sorts, and, being end wood, takes colors or tints admirably. The varied grain is affected differently by the same application, one line where the fibre is very thick and close absorbing but little; another of looser texture taking on a much deeper shade.

All in all it may be questioned whether the artificially grained veneers are not superior to many that are naturally waved and mottled. Of course, in a general sense, all are made by a similar process. The difference being that in the natural wood the grain grows across and is cut on the straight, while by the artificial process the grain grows straight and is cut cross-wise on curves and angles. The machine makes it possible to produce a greater variety, and doubtless as the idea develops, new shapes in knife edges will be made, and the variety of figure will be infinitely varied.

When the sheets of veneer come from the edge of the corrugated knife, they are as wavy as the crimps on the brow of beauty. Of course, they must be made flat, as they cannot be used in their thin, uneven shape, and, still damp and steaming they are carried to the hydraulic press, and stacked up in piles of suitable size. When they have lain for some hours under a



THE PICTURE GALLERY OF ALEXANDER DUMAS.

pressure of forty tons to the square inch, they are as one might imagine, quite flat enough for all practical purposes, and so discouraged are they in any inherent desire to preserve their natural straightness of grain, that neither boiling, steaming, or soaking will cause them to resume the state of crimpiness in which they came from the cutting machine.

Veneers must be dried with great care or they will warp. They are usually placed under moderate weight and kept as nearly smooth as may be.

They must not be allowed to dry in the hydraulic press, as they would crack and become worthless for fine work.

Those who have never given attention to the subject cannot imagine how interesting the study of the various woods may be made. Fine natural veneers are like striped grass, no two pieces are exactly alike, and the variations in the same sheet of veneer in certain kinds of wood are almost infinite. The new waved-edge knife has thus far been used on the more ordinary and inexpensive qualities of wood. As it becomes still more perfect in construction, it will be used on finer woods and will still further vary the grain of fancy woods, and create new beauty in fine woods—those that have heretofore depended for their value mainly on their exquisite firmness and color, and their susceptibility to high finish.

The new machine, while apparently simple and easily managed, must be watched with the greatest care, and every piece of wood put into it is subjected to the closest scrutiny that no nail, spike or stone may be concealed in it, as a tiny pebble will instantly take out half an inch from the edge of the knife blade and destroy it for immediate use. To grind one of these blades is a tedious and expensive process. The knife is about twelve feet long and is set in a frame attached to a bar which runs in

an eccentric exactly corresponding to the stroke of the grinding apparatus. A fine emery wheel revolves with almost lightning rapidity, moving up to the edge of the blade and retreating to return again to the attack just the merest fraction of an inch beyond the previous point of contact. As the wheel touches the metal a line of fire flies up and tiny sparks scatter in every direction. The grinding machinery is automatic in its action and attached to the steam power, but this has been found less practical than hand power, as it is less manageable and works too rapidly for the temper of the metal. Therefore, an experienced man sits by with one hand on the bar and regulates the speed, the wheels moving only at a moderate rate. With constant attention one man consumes at least thirty days in grinding the blade, and the cutter's care of his newly ground knife is jealous indeed. There are divers other veneer cutting machines, some of which take off shavings one-thirtieth of an inch in thickness, beginning at the outer surface of the log and continuing in gradually decreasing circles until nothing is left but a small pole to which the clamps and fastening spikes are attached. Hundreds of feet of continuous veneer ribbons are turned off in this way. Any one who would realize the tremendous power necessary to operate one of these machines, might take a block of hard wood one inch square, and attempt to shave off a clean, thin even shaving, one-thirtieth of an inch in thickness. Then consider the force necessary to run a knife fourteen feet long, through a log almost that length, and to take off a continuous shaving that rolls up like ribbon on a block, and never stops even though the knife encounters knots, burl, cross-grain, or the various eccentricities in growth that abound in wood of all kinds.

Imagine one million feet of fine rosewood veneer in one mass, and half as much mahogany. Think of miles of cherry, red cedar, satin wood, burl ash, California redwood, some of it mottled and flaked with color, looking almost like the marbled edges of an elegant book done in shades of brown and garnet. Note the machinery, and reflect what is meant by a pressure of forty tons to the square inch, and after all of this, turn your attention to fine furniture and wonder at the patience, perseverance and ingenuity of man, and that articles of medium price can be made that are quite as good for all practical purposes as those that cost five or ten times the amount, and all because veneering and its skillful application have worked a revolution in the furniture and wood-working business, and made beauty and variety not only possible but easy, where else plainness and monotony must exist.

WHERE the woodwork is well finished and dressed smooth and level, gloss or enamel makes a very fine and beautiful as well as durable finish. It is done by first putting on a good ground of white lead paint, flatted and finely rubbed down with sandpaper. Then put into the paint some white copal varnish, sufficient to leave an eggshell gloss when dry, being very careful that it is applied smoothly and laid off finely, leaving no runs or strong brush marks. Then apply varnish alone with just enough paint to cover it. This last coat must be flowed on the work, and not rubbed out or brushed like the previous coats, but left on thicker or in greater body, evenly brushed, out so as not to be thicker in one place than in another, or full in the mouldings so as to run out over the stile or panel. Zinc-white of the best quality, broken up thick with turpentine and strained very fine, should be used for the last two coats. Enamel finish, to retain its pure white, should be made with zinc ground in varnish for the purpose, the first coat thinned with turpentine, the last with good copal varnish.

IN going through the porcelain districts of Seto and Mino, I found, says Mr. Christopher Dresser, that some of the potters decorated their own wares, while others sent them to professional artists to receive patterns. Thus, in the village of Zazini, I purchased a small sacchi bottle, decorated in the style of Kaga ware, which had been painted by an artist in the village; and in Ichi-no-Kura I found several men in business for themselves, who undertook the painting of any ware entrusted to them. I also found that much of the better wares from both Seto and Mino were sent to Nagoya to be decorated, where the two chief artists who undertake this work are Yokoi Sōsuke and Suyemoto Suzukichi, the former being eminent as a painter of gold work on an iron-black ground.

THERE is nothing to which exception cannot be taken. A foreign critic declares that neither doors nor outside blinds should be painted green because wood is not green; he further adds that iron should not be painted red because it suggests rust. Were the first affirmation correct it would follow that no material should appear other than in its natural color—an absurd proposition. The second dictum is equally so, for in respect to all colors, it would make individual associations the rule of artistic treatment.